NC/QC/YPD/SIP-01/2017-18/SH-DM1A

Date: 20-04-2018

1.TEST REPORT ON BITUMINOUS MIXES :

(BITUMEN EXTRACTION TEST & GRADATION TEST)

Sub: To determine the percentage of bitumen and gradation for DBM mix sample.
{Project*: Improvements to Main roads and drains at Shivanahalli.}
Ref.: Material testing/PMC/17-18,
Report Required for: Assistant Executive Engineer,
Yelahanka Project Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M/s KRIDL, Bangalore.

TEST RESULTS

A. Type of Construction : **Dense Graded Bituminous Macadam.**

1. The bitumen content obtained after subjecting the sample for Bitumen Extraction test = **4.54 %**

2. **Gradation Test**

TABLE 1.1

Sieve Size, mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Gradation requirement as per Table 500-10 of MORTH Specfications-2013 DBM (Grading - 2)
37.5	**100**	100
26.5	**98.90**	90-100
19.0	**81.30**	71-95
13.20	**64.85**	56-80
4.75	**43.10**	38-54
2.36	**30.40**	28-42
0.300	**16.55**	7-21
0.075	**5.70**	2-8

*As Furnished by Client.
The Results relate only to the items tested.

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For Newzen Consultants Bangalore

Proprietor

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NC/QC/YPD/SIP-01/2017-18/SH-DBM2A Date: 21-04-2018

1.TEST REPORT ON BITUMINOUS MIXES :

(BITUMEN EXTRACTION TEST & GRADATION TEST)

Sub: To determine the percentage of bitumen and gradation for DBM mix sample.
{Project*: Improvements to Main roads and drains at Shivanahalli.}
Ref.: Material testing/PMC/17-18,
Report Required for: Assistant Executive Engineer,
Yelahanka Project Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M/s KRIDL, Bangalore.

TEST RESULTS

A. Type of Construction : **Dense Graded Bituminous Macadam.**

1. The bitumen content obtained after subjecting the sample for Bitumen Extraction test = **4.50 %**

2. **Gradation Test**

TABLE 1.1

Sieve Size, mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Gradation requirement as per Table 500-10 of MORTH Specfications-2013 DBM (Grading - 2)
37.5	**100**	100
26.5	**95.30**	90-100
19.0	**80.65**	71-95
13.20	**69.10**	56-80
4.75	**52.05**	38-54
2.36	**34.90**	28-42
0.300	**16.20**	7-21
0.075	**5.45**	2-8

*As Furnished by Client.
The Results relate only to the items tested.

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NC/QC/YPD/SIP-01/2017-18/SH-CA2A

Date: 21-04-2018

1. TEST REPORT ON COARSE AGGREGATE:

Sub: Testing of Coarse Aggregate used in Dense Graded Bituminous Macadam.
{Project*: Improvements to Main roads and drains at Shivanahalli.}
Ref.: Material testing/PMC/17-18,
Report Required for: Assistant Executive Engineer,
Yelahanka Project Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M/s KRIDL, Bangalore.

TABLE 1.1 ;

SL No	Test conducted	Test Results	Tests Conforms to IS 2386(Part I to IV)– 1963 (Reaffirmed on 2002) & Requirements as per IS:383-1970 & M.o.R.T.H Specification, V Revision -2013.
1.	Aggregate Impact Value	**25.71 %**	Not more than 27.00 % for DBM
2.	Combined Flakiness and Elongation index, %	**26.98 %**	Not more than 35.0 %
3.	Water absorption, %	**0.35 %**	Not more than 2.0 %
4.	Specific gravity	**2.53**	-------
5.	Soundness	**6.94 %**	Max. 12 % in Sodium Sulphate

*As furnished by Client.
The results relate only to the samples tested.

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Newzen Consultants Bangalore

NC/QC/YPD/SIP-01/2017-18/SH-DM3A

Date: 23-04-2018

1.TEST REPORT ON BITUMINOUS MIXES :

(BITUMEN EXTRACTION TEST & GRADATION TEST)

Sub: To determine the percentage of bitumen and gradation for DBM mix sample.

{Project*: Improvements to Main roads and drains at Shivanahalli.}

Ref.: Material testing/PMC/17-18,

Report Required for: Assistant Executive Engineer,
Yelahanka Project Division,
BBMP, Bangalore.

Name of the Agency/Contractor*: M/s KRIDL, Bangalore.

TEST RESULTS

A. Type of Construction : **Dense Graded Bituminous Macadam.**

1. The bitumen content obtained after subjecting the sample for Bitumen Extraction test = **4.51 %**

2. **Gradation Test**

TABLE 1.1

Sieve Size, mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Gradation requirement as per Table 500-10 of MORTH Specfications-2013 DBM (Grading - 2)
37.5	**100**	100
26.5	**98.45**	90-100
19.0	**85.15**	71-95
13.20	**71.95**	56-80
4.75	**44.60**	38-54
2.36	**37.75**	28-42
0.300	**15.05**	7-21
0.075	**5.90**	2-8

*As Furnished by Client.

The Results relate only to the items tested.

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NC/QC/YPD/SIP-01/2017-18/SH-DBM4A

Date: 24-04-2018

1.TEST REPORT ON BITUMINOUS MIXES :

(BITUMEN EXTRACTION TEST & GRADATION TEST)

Sub: To determine the percentage of bitumen and gradation for DBM mix sample.
{Project*: Improvements to Main roads and drains at Shivanahalli.}
Ref.: Material testing/PMC/17-18,
Report Required for: Assistant Executive Engineer,
Yelahanka Project Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M/s KRIDL, Bangalore.

TEST RESULTS

A. Type of Construction : **Dense Graded Bituminous Macadam.**

1. The bitumen content obtained after subjecting the sample for Bitumen Extraction test = **4.53 %**

2. **Gradation Test**

TABLE 1.1

Sieve Size, mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Gradation requirement as per Table 500-10 of MORTH Specfications-2013 DBM (Grading - 2)
37.5	**100**	100
26.5	**98.15**	90-100
19.0	**81.90**	71-95
13.20	**74.60**	56-80
4.75	**51.05**	38-54
2.36	**38.80**	28-42
0.300	**15.55**	7-21
0.075	**5.25**	2-8

*As Furnished by Client.
The Results relate only to the items tested.

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NC/QC/YPD/SIP-01/2017-18/SH-B2

Date: 23-04-2018

1. TEST REPORT ON BITUMEN SAMPLE:

Sub: Testing of Bitumen sample VG-30 Grade.
{Project*: Improvements to Main roads and drains at Shivanahalli.}
Ref.: Material testing/PMC/17-18,
Report Required for: Assistant Executive Engineer,
Yelahanka Project Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M/s KRIDL, Bangalore.
Technical Reference: Ministry of Road Transport and Highways, V Revision, 2013 and IS 73: 1992.

TABLE 1.1 ;

SL No	Details	Test Results	Requirements as per I.S 73 –1992 Specifications
1.	Penetration at 25^0 C	**50.80^0 C**	Min. 45
2.	Ductility Value at 25^0 C	**106 cm**	40
3.	Flash point	**243^0 C**	Minimum 220^0 C
4.	Softening point	**51.30^0 C**	Min. 47

*As furnished by Client.
The results relate only to the samples tested.

Page No. 1/1,

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NC/QC/YPD/SIP-01/2017-18/SH-BC1A **Date: 24-04-2018**

1.TEST REPORT ON BITUMINOUS MIXES :

(BITUMEN EXTRACTION TEST & GRADATION TEST)

Sub: To determine the percentage of bitumen and gradation for BC mix sample.
{Project*: Improvements to Main roads and drains at Shivanahalli.}
Ref.: Material testing/PMC/17-18,
Report Required for: Assistant Executive Engineer,
Yelahanka Project Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M/s KRIDL, Bangalore.

TEST RESULTS

A. Type of Construction : **Bituminous Concrete**

1. The bitumen content obtained after subjecting the sample for Bitumen Extraction test = **5.41 %**

2. **Gradation Test**

TABLE 1.1

Sieve Size, mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Gradation requirement as per Table 500-17 of MORTH Specfications-2013 BC (Grading - 2)
19.0	**100**	100
13.2	**97.80**	90-100
9.5	**84.65**	70-88
4.75	**61.25**	53-71
2.36	**54.10**	42-58
1.18	**37.95**	34-48
0.600	**31.20**	26-38
0.300	**23.90**	18-28
0.150	**15.35**	12-20
0.075	**6.75**	4-10

*As Furnished by Client.
The Results relate only to the items tested.

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NC/QC/YPD/SIP-01/2017-18/SH-BC2A

Date: 25-04-2018

1.TEST REPORT ON BITUMINOUS MIXES :

(BITUMEN EXTRACTION TEST & GRADATION TEST)

Sub: To determine the percentage of bitumen and gradation for BC mix sample.
{Project*: Improvements to Main roads and drains at Shivanahalli.}
Ref.: Material testing/PMC/17-18,
Report Required for: Assistant Executive Engineer,
Yelahanka Project Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M/s KRIDL, Bangalore.

TEST RESULTS

A. Type of Construction : **Bituminous Concrete**

1. The bitumen content obtained after subjecting the sample for Bitumen Extraction test = **5.42 %**

2. **Gradation Test**

TABLE 1.1

Sieve Size, mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Gradation requirement as per Table 500-17 of MORTH Specfications-2013 BC (Grading - 2)
19.0	**100**	100
13.2	**97.35**	90-100
9.5	**82.10**	70-88
4.75	**60.75**	53-71
2.36	**49.40**	42-58
1.18	**37.60**	34-48
0.600	**31.25**	26-38
0.300	**23.90**	18-28
0.150	**17.05**	12-20
0.075	**6.70**	4-10

*As Furnished by Client.
The Results relate only to the items tested.

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NC/QC/YPD/SIP-01/2017-18/SH-CA3A

Date: 25-04-2018

1. TEST REPORT ON COARSE AGGREGATE:

Sub: Testing of Coarse Aggregate used in Bituminous Concrete.
{Project*: Improvements to Main roads and drains at Shivanahalli.}
Ref.: Material testing/PMC/17-18,
Report Required for: Assistant Executive Engineer,
Yelahanka Project Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M/s KRIDL, Bangalore.

TABLE 1.1 ;

SL No	Test conducted	Test Results	Tests Conforms to IS 2386(Part I to IV)– 1963 (Reaffirmed on 2002) & Requirements as per IS:383-1970 & M.o.R.T.H Specification, V Revision -2013.
1.	Aggregate Impact Value	**23.37 %**	Not more than 24.00 %
2.	Combined Flakiness and Elongation index, %	**28.16%**	Not more than 35.0 %
3.	Water absorption, %	**0.35%**	Not more than 2.0 %
4.	Specific gravity	**2.56**	-------
5.	Soundness	**6.49 %**	Max. 12 % in Sodium Sulphate

*As furnished by Client.
The results relate only to the samples tested.

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NC/QC/YPD/SIP-01/2017-18/SH-BC3A Date: 26-04-2018

1.TEST REPORT ON BITUMINOUS MIXES :

(BITUMEN EXTRACTION TEST & GRADATION TEST)

Sub: To determine the percentage of bitumen and gradation for BC mix sample.
{Project*: Improvements to Main roads and drains at Shivanahalli.}
Ref.: Material testing/PMC/17-18,
Report Required for: Assistant Executive Engineer,
Yelahanka Project Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M/s KRIDL, Bangalore.

TEST RESULTS

A. Type of Construction : **Bituminous Concrete**

1. The bitumen content obtained after subjecting the sample for Bitumen Extraction test = **5.40 %**

2. **Gradation Test**

TABLE 1.1

Sieve Size, mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Gradation requirement as per Table 500-17 of MORTH Specfications-2013 BC (Grading - 2)
19.0	**100**	100
13.2	**95.85**	90-100
9.5	**80.10**	70-88
4.75	**62.65**	53-71
2.36	**56.30**	42-58
1.18	**37.45**	34-48
0.600	**31.05**	26-38
0.300	**23.75**	18-28
0.150	**19.05**	12-20
0.075	**8.20**	4-10

*As Furnished by Client.
The Results relate only to the items tested.

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NC/QC/YPD/SIP-01/2017-18/SH-BC4A

Date: 27-04-2018

1.TEST REPORT ON BITUMINOUS MIXES :

(BITUMEN EXTRACTION TEST & GRADATION TEST)

Sub: To determine the percentage of bitumen and gradation for BC mix sample.
{Project*: Improvements to Main roads and drains at Shivanahalli.}
Ref.: Material testing/PMC/17-18,
Report Required for: Assistant Executive Engineer,
Yelahanka Project Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M/s KRIDL, Bangalore.

TEST RESULTS

A. Type of Construction : **Bituminous Concrete**

1. The bitumen content obtained after subjecting the sample for Bitumen Extraction test = **5.41 %**

2. **Gradation Test**

TABLE 1.1

Sieve Size, mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Gradation requirement as per Table 500-17 of MORTH Specfications-2013 BC (Grading - 2)
19.0	**100**	100
13.2	**97.60**	90-100
9.5	**83.25**	70-88
4.75	**67.10**	53-71
2.36	**51.85**	42-58
1.18	**40.30**	34-48
0.600	**32.70**	26-38
0.300	**20.45**	18-28
0.150	**14.90**	12-20
0.075	**7.65**	4-10

*As Furnished by Client.
The Results relate only to the items tested.

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